



**The California Collaborative on  
District Reform**



# Raising Expectations for Mathematics Instruction in California: Algebra and Beyond

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*Sacramento, CA*

*April 29, 2011*

# California Collaborative on District Reform

- ▶ Joins district leaders, researchers, state policy actors, and funders in on-going evidence-based dialogue and collective action to improve instruction and student learning in California school systems
- ▶ District participants: Long Beach USD, Los Angeles USD, Garden Grove USD, Fresno USD, Oakland USD, Sacramento USD, San Bernardino USD, San Francisco USD, Sanger USD, (Hayward USD)

# Fundamental Question:

- ▶ How can we best ensure success for all students in algebra and higher mathematics?
  - ▶ Clarify goals for mathematics instruction
  - ▶ Focus and deepen mathematics instruction, K-12
  - ▶ Develop systems and evidence-based criteria for more effective and equitable placement into algebra and advanced mathematics course. Consider:
    - Student mathematics pathways
    - Issues of equity and access

# Data should inform approach to algebra

- ▶ Mathematics proficiency and course passing rates
- ▶ Mathematics artifacts
  - ▶ Course pathways
  - ▶ Course loads and class sizes
  - ▶ Quality of algebra content and instruction
- ▶ Language proficiency
- ▶ Student enrollment trends
- ▶ Instructional capacity
  - ▶ Numbers of G8 and G9 math teachers qualified to teach algebra
  - ▶ Potential for moving qualified teachers where most needed
  - ▶ Potential retirements

# Instructional capacity to support student success

- ▶ Review qualifications of current mathematics teachers
- ▶ Build capacity through recruitment, retention, reassignment
  - ▶ Incentives for re-assignment , hard-to-staff subjects
  - ▶ Integrate HR and academic leadership
  - ▶ Empower mathematics departments
- ▶ Provide high quality professional development in math
  - ▶ Build professional learning communities
  - ▶ Provide content-focused PD

# Effective support for struggling students

- ▶ Provide tiered/differentiated support
  - ▶ In-class supports
  - ▶ Lower intensity outside-of-class support
  - ▶ Higher intensity outside-of-class support
- ▶ Targeted support for subpopulations (ELs)

# Recommendations for the state

- ▶ Allow districts to make enrollment decisions
- ▶ Re-examine state adopted standards and texts
- ▶ Provide diagnostic data on student performance
- ▶ Review credentialing criteria
- ▶ Consider alternative strategies to build pool of qualified mathematics teachers.
- ▶ Examine and realign accountability and support programs
- ▶ Allocate resources toward addressing issues of ELs in algebra and other mathematics course



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